PCT09

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/763,985

DATE: 09/24/2001 TIME: 15:44:13

Input Set : A:\0020-4817P.ST25.txt Output Set: N:\CRF3\09242001\1763985.raw

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5 < 120> TITLE OF INVENTION: NOVEL TUMOR ANTIGEN PROTEIN SART-3 AND TUMOR ANTIGEN PEPTIDES THEREOF 7 < 130> FILE REFERENCE: 0020-4817P 9 < 140> CURRENT APPLICATION NUMBER: 09/763,985 10 < 141> CURRENT FILING DATE: 2001-02-28 12 < 160> NUMBER OF SEQ ID NOS: 64 14 < 170> SOFTMARE: PATENTIA PEPTICATION NUMBER: 09/763,985 18 < 210> SEQ ID NO: 1 17 < 211> LENGTH: 3798 18 < 212> TYPE: DNA 19 < 213> ORGANISM: HOMO SAPIENS 21 < 220> FEATURE: 22 < 221> NAME/KEY: CDS 23 < 222> LOCATION: (12)(2900) 24 < 223> OTHER INFORMATION: 27 < 400> SEQUENCE: 1 28 ccacgegtcc g atg gcg act gcg gcc gaa acc tcg gct tca gaa ccc gag 29 Met Ala Thr Ala Ala Glu Thr Ser Ala Ser Glu Pro Glu 30 1 1 32 gct gag tcc aag gct ggc cc aag gct gac gag aga gag aga gag gt gag 33 Ala Glu Ser Lys Ala Gly Pro Lys Ala Asp Gly Glu Glu Asp Glu Val 34 15 20 36 aag gcg gct agg aca agg aga aag gtg tta tcg cgg gct gcg gcc gct 37 Lys Ala Ala Arg Thr Arg Arg Lys Val Leu Ser Arg Ala Val Ala Ala 38 30 25 36 aag gcg gcd agg aca agg aga agg gtg gad cag gcg gag gag gag gag gag 41 Ala Thr Tyr Lys Thr Met Gly Pro Ala Trp Asp Gln Gln Glu Glu Glu 42 50 55 44 gtg agc gag agc gat gag gad tagg at agg cad gag gag gag 45 Val Ser Glu Ser Asp Gly Asp Glu Tyr Ala Met Ala Ser Ser Ala Glu 45 Val Ser Glu Ser Asp Gly Asp Glu Tyr Ala Met Ala Ser Ser Ala Glu 46 65 70 47 4 gtg agc gag att gag att gag tag gca gad gag gag gag gag aaa 49 Ser Ser Pro Gly Glu Tyr Glu Trp Glu Try Asp Glu Glu Glu Glu Glu Gly 50 80 51 Asn Gln Leu Glu Ile Glu Arg Leu Glu Glu Glu Glu Glu Glu Glu 55 100 56 tat gac tca cac tgc cat gtg gac ttg atc aga cag gct gag gag gag aaa 57 Tyr Asp Tyr Asn Cys His Val Asp Leu Ile Arg Leu Leu Arg Leu Glu 58 100 59 110 60 ggg gag ctt acc aag gtg ag at gc gcc gcc gag ag ag at gag gad atc 61 Gly Glu Leu Thr Lys Val Arg Met Ala Arg Glu Lys Met Ser Glu Ile 62 130 64 ttt ccc ttg act gag ag ctc tg ctg gag tcg gag tcg aga gac 65 Phe Pro Leu Thr Glu Glu Leu Try Leu His Asp Gut Ile	3	3 <11	.0> 1	APPL	CAN	r: I:	гон,	Kyo	io et	t al									
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9 <140> CURRENT APPLICATION NUMBER: 09/763,985 10 <141> CURRENT FILING DATE: 2001-02-28 12 <160> NUMBER OF SEQ ID NOS: 64 14 <170> SOFTMARE: PatentIn version 3.1 16 <210> SEQ ID NOS: 1 17 <211> LENGTH: 3798 18 <212> TYPE: DNA 19 <213> ORGANISM: Homo sapiens 21 <220> FEATURE: 22 <221> NAME/KEY: CDS 23 <222> LOCATION: (12)(2900) 24 <223> OTHER INFORMATION: 27 <400> SEQUENCE: 1 28 ccacgctcc g atg gcg act gcg gcc gaa acc tcg gct tca gaa ccc gag 9	PEPTIDE	S TH	EREC	F											J_11 \	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	J MILD	TOPOK ANTIGEN	
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33 Ala Glu Ser Lys Ala Gly Pro Lys Ala Asp Gly Glu Glu Asp Glu Val 34			σασ	tcc	_	act	aaa	ccc	_	act	730	~~~	~~~					0.0	
34	33	Δla	Glu	Sar	Tve	λla	C117	Dro	Tree	31-	. yac	gya	yay	gag	gat	gag	gtt	98	
36 aag gcg gct agg aca agg aga aag gtg tta tcg cgg gct gtg gcc gct 146 37 Lys Ala Ala Arg Thr Arg Arg Lys Val Leu Ser Arg Ala Val Ala Ala 38 30	3.4	AIU	15	261	цуз	нта	GIY		ьуѕ	Ата	ASP	СТУ		GIU	Asp	GLu	Val		
37 Lys Ala Ala Arg Thr Arg Arg Lys Val Leu Ser Arg Ala Val Ala Ala 38 30																			
38 30	30	aay	geg	get	agg	aca	agg	aga	aag	gtg	tta	tcg	cgg	gct	gtg	gcc	gct	146	
40 gcg aca tac aag acc atg ggg cca gcg tgg gat cag cag gag gaa ggc 194 41 Ala Thr Tyr Lys Thr Met Gly Pro Ala Trp Asp Gln Gln Glu Glu Gly 42 50 55 60 44 gtg agc gag agc gat ggg gat gag tac gcc atg gct tcc tcc gcg gag 242 45 Val Ser Glu Ser Asp Gly Asp Glu Tyr Ala Met Ala Ser Ser Ala Glu 46 65 70 70 75 48 agc tcc ccc ggg gag tac gag tgg gaa tat gac gaa gag gag gag gag aaa 290 49 Ser Ser Pro Gly Glu Tyr Glu Trp Glu Tyr Asp Glu Glu Glu Lys 50 80 85 52 aac cag ctg gag att gag aga ctg gag gag cag ttg tct atc aac gtc 338 53 Asn Gln Leu Glu Ile Glu Arg Leu Glu Glu Glu Glu Lys 95 100 105 56 tat gac tac aac tgc cat gtg gac ttg atc aga ctg ctc agg ctg gaa 386 57 Tyr Asp Tyr Asn Cys His Val Asp Leu Ile Arg Leu Leu Arg Leu Glu 58 110 115 120 125 60 ggg gag ctt acc aag gtg agg atg agg atg agg atg agg atg agg atg aga atc 434 61 Gly Glu Leu Thr Lys Val Arg Met Ala Arg Gln Lys Met Ser Glu Ile 62 130 135 135 140 64 ttt ccc ttg act gag gag ctc tgg ctg gag tgg ctg cat gac gag atc 482 65 Phe Pro Leu Thr Glu Glu Leu Trp Leu Glu Trp Leu His Asp Glu Ile	37	ьys	Ald	Ата	Arg	Thr		Arg	Lys	Val	Leu		Arg	Ala	Val	Ala	Ala		
41 Ala Thr Tyr Lys Thr Met Gly Pro Ala Trp Asp Gln Gln Glu Glu Gly 42																			
42	40	gcg	aca	tac	aag	acc	atg	ggg	cca	gcg	tgg	gat	cag	cag	gag	gaa	ggc	194	
44 gtg agc gag agc gat ggg gat gag tac gag tac gcc atg gct tcc tcc gcg gag 45 Val Ser Glu Ser Asp Gly Asp Glu Tyr Ala Met Ala Ser Ser Ala Glu 46 65 70 70 75 48 agc tcc ccc ggg gag tac gag tgg gaa tat gac gaa gag gag gag aaa 290 49 Ser Ser Pro Gly Glu Tyr Glu Trp Glu Tyr Asp Glu Glu Glu Glu Glu Lys 50 80 85 90 52 aac cag ctg gag att gag aga ctg gag gag cag ttg tct atc aac gtc 53 Asn Gln Leu Glu Ile Glu Arg Leu Glu Glu Gln Leu Ser Ile Asn Val 54 95 100 105 56 tat gac tac aac tgc cat gtg gac ttg atc aga ctg ctc agg ctg gaa 386 57 Tyr Asp Tyr Asn Cys His Val Asp Leu Ile Arg Leu Leu Arg Leu Glu 58 110 115 120 125 60 ggg gag ctt acc aag gtg agg atg gcc cgc cag aag atg agt gaa atc 434 61 Gly Glu Leu Thr Lys Val Arg Met Ala Arg Gln Lys Met Ser Glu Ile 62 130 135 140 64 ttt ccc ttg act gaa gag ctc tgg ctg gag tgg ctg cat gac gag atc 482 65 Phe Pro Leu Thr Glu Glu Leu Trp Leu Glu Trp Leu His Asp Glu Ile	41	Ala	Thr	Tyr	Lys	Thr	Met	Gly	Pro	Ala	Trp	Asp	Gln	Gln	Glu	Glu	Gly		
45 Val Ser Glu Ser Asp Gly Asp Glu Tyr Ala Met Ala Ser Ser Ala Glu 46 65 70 70 75 48 agc tcc ccc ggg gag tac gag tgg gaa tat gac gaa gag gag gag gag aaa 290 49 Ser Ser Pro Gly Glu Tyr Glu Trp Glu Tyr Asp Glu Glu Glu Glu Lys 50 80 85 90 52 aac cag ctg gag att gag aga ctg gag gag cag ttg tct atc aac gtc 338 53 Asn Gln Leu Glu Ile Glu Arg Leu Glu Glu Gln Leu Ser Ile Asn Val 54 95 100 105 56 tat gac tac aac tgc cat gtg gac ttg atc aga ctg ctc agg ctg gaa 386 57 Tyr Asp Tyr Asn Cys His Val Asp Leu Ile Arg Leu Leu Arg Leu Glu 58 110 115 120 125 60 ggg gag ctt acc aag gtg agg atg gcc cgc cag aag atg agt gaa atc 434 61 Gly Glu Leu Thr Lys Val Arg Met Ala Arg Gln Lys Met Ser Glu Ile 62 130 135 140 64 ttt ccc ttg act gaa gag ctc tgg ctg gag tgg ctg cat gac gag atc 482 65 Phe Pro Leu Thr Glu Glu Leu Trp Leu Glu Trp Leu His Asp Glu Ile	42					50					55					60	_		
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46	45	Val	Ser	Glu	Ser	Asp	Gly	Asp	Glu	Tyr	Āla	Met	Ála	Ser	Ser	Ala	Glu		
48 agc tcc ccc ggg gag tac gag tgg gaa tat gac gaa gag gag gag aaa 290 49 Ser Ser Pro Gly Glu Tyr Glu Trp Glu Tyr Asp Glu Glu Glu Glu Lys 85 90 52 aac cag ctg gag att gag aga ctg gag gag cag ttg tct atc aac gtc 338 53 Asn Gln Leu Glu Ile Glu Arg Leu Glu Glu Gln Leu Ser Ile Asn Val 105 56 tat gac tac aac tgc cat gtg gac ttg atc aga ctg ctc agg ctg gaa 386 57 Tyr Asp Tyr Asn Cys His Val Asp Leu Ile Arg Leu Leu Arg Leu Glu 125 60 ggg gag ctt acc aag gtg agg atg gcc cgc cag aag atg agt gaa atc 434 61 Gly Glu Leu Thr Lys Val Arg Met Ala Arg Gln Lys Met Ser Glu Ile 130 64 ttt ccc ttg act gaa gag ctc tgg ctg gag tgg ctg cat gac gag atc 482 65 Phe Pro Leu Thr Glu Glu Leu Trp Leu Glu Trp Leu His Asp Glu Ile	46					_	_	-									014		
49 Ser Ser Pro Gly Glu Tyr Glu Trp Glu Tyr Asp Glu Glu Glu Glu Lys 50 80 85 90 52 aac cag ctg gag att gag aga ctg gag gag cag ttg tct atc aac gtc 338 53 Asn Gln Leu Glu Ile Glu Arg Leu Glu Glu Gln Leu Ser Ile Asn Val 54 95 100 105 56 tat gac tac aac tgc cat gtg gac ttg atc aga ctg ctc agg ctg gaa 386 57 Tyr Asp Tyr Asn Cys His Val Asp Leu Ile Arg Leu Leu Arg Leu Glu 58 110 115 120 125 60 ggg gag ctt acc aag gtg agg atg gcc cgc cag aag atg agt gaa atc 434 61 Gly Glu Leu Thr Lys Val Arg Met Ala Arg Gln Lys Met Ser Glu Ile 62 130 135 140 64 ttt ccc ttg act gaa gag ctc tgg ctg gag tgg ctg cat gac gag atc 482 65 Phe Pro Leu Thr Glu Glu Leu Trp Leu Glu Trp Leu His Asp Glu Ile	48	agc	tcc	ccc	aaa	gag	tac	gag	t.aa	gaa	tat	gac	σаа	gag		σασ	222	200	
50	49	Ser	Ser	Pro	Glv	Ğlü	Tvr	Glu	Trp	Glu	Tyr	Agn	Glu	Glu	Glu	Glu	Tuc	230	
52 aac cag ctg gag att gag aga ctg gag gag cag ttg tct atc aac gtc 53 Asn Gln Leu Glu Ile Glu Arg Leu Glu Gln Leu Ser Ile Asn Val 54 95 100 105 56 tat gac tac aac tgc cat gtg gac ttg atc aga ctg ctc agg ctg gaa 386 57 Tyr Asp Tyr Asn Cys His Val Asp Leu Ile Arg Leu Leu Arg Leu Glu 58 110 115 120 125 60 ggg gag ctt acc aag gtg agg atg gcc cgc cag aag atg agt gaa atc 434 61 Gly Glu Leu Thr Lys Val Arg Met Ala Arg Gln Lys Met Ser Glu Ile 62 130 135 140 64 ttt ccc ttg act gaa gag ctc tgg ctg gag tgg ctg cat gac gag atc 482 65 Phe Pro Leu Thr Glu Glu Leu Trp Leu Glu Trp Leu His Asp Glu Ile	50			80	1		-1-			O L u	-1-	nsp	Olu		Giu	Giu	цуѕ		
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56 tat gac tac aac tgc cat gtg gac ttg atc aga ctg ctc agg ctg gaa 57 Tyr Asp Tyr Asn Cys His Val Asp Leu Ile Arg Leu Leu Arg Leu Glu 58 110	54	11511	05	Deu	GIU	116	Giu		ьеu	GIU	GIU	GIII		ser	тте	Asn	Val		
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60 ggg gag ctt acc aag gtg agg atg gcc cgc cag aag atg agt gaa atc 61 Gly Glu Leu Thr Lys Val Arg Met Ala Arg Gln Lys Met Ser Glu Ile 62 130 135 140 64 ttt ccc ttg act gaa gag ctc tgg ctg gag tgg ctg cat gac gag atc 65 Phe Pro Leu Thr Glu Glu Leu Trp Leu Glu Trp Leu His Asp Glu Ile	5/	TYT	ASP	Tyr	Asn	Cys		۷al	Asp	Leu	Ile		Leu	Leu	Arg	Leu			
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62 130 135 140 64 ttt ccc ttg act gaa gag ctc tgg ctg gag tgg ctg cat gac gag atc 482 65 Phe Pro Leu Thr Glu Glu Leu Trp Leu Glu Trp Leu His Asp Glu Ile	61	Gly	Glu	Leu	Thr	Lys	Val	Arg	Met	Ala	Arg	Gln	Lys	Met	Ser	Glu	Ile		
64 ttt ccc ttg act gaa gag ctc tgg ctg gag tgg ctg cat gac gag atc 482 65 Phe Pro Leu Thr Glu Glu Leu Trp Leu Glu Trp Leu His Asp Glu Ile	62					130					135					140			
65 Phe Pro Leu Thr Glu Glu Leu Trp Leu Glu Trp Leu His Asp Glu Ile	64	ttt	CCC	ttg	act	gaa	gag	ctc	tgg	ctg	gag	tgg	ctq	cat	gac	σaσ	atc	482	
	65	Phe	Pro	Leu	Thr	Glu	Glu	Leu	Trp	Leu	Glu	Trp	Leu	His	Asp	Glu	Tle	.02	
	66				145				-	150					155				

68 agc atg gcc cag gat ggc ctg gac aga gag cac gtg tat gac ctc ttt

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73	Glu	Lvs	λla	Vaĺ	Lvs	Asp	Tvr	Tle	Cvs	Pro	Δsn	Tlo	Trn	T.eu	Glu	Tur		J , J
74		175			2,2		180		010	110	11511	185	115	nea	Gru	1 Y 1		
	aac		+ > 0	+ 00	~++	~~+		-++	~									c 0 c
						ggt												626
		GIII	туг	ser	vaı	Gly	GTÄ	тте	GTA	GIn		GTA	GIY	Leu	GLu	_		
	190					195					200					205		
						gaa											,	674
81	Val	Arg	Ser	Val	Phe	Glu	Arg	Ala	Leu	Ser	Ser	Val	Gly	Leu	His	Met		
82					210					215					220			
84	acc	aaa	gga	ctc	gcc	ctc	tgg	gag	qct	tac	cqa	qaq	ttt	qaa	agt	aca		722
						Leu												
86		-	-	225			-		230		J			235				
	att	ata	σаа		act	cgg	ctt	σασ		atc	cac	aat	c++		caa	og a		770
89	Tla	Val	Glu	Δla	Δla	Arg	LOU	Clu	Lvc	Val.	Hic	Cor	LOU	Dho	7 22	Zya Zwa		770
90	110	VUI	240	ALG	AIG	ALG		245	пуъ	vaı	птэ	ser		Pile	ALG	AIG		
													250					
92	cag	LLG -	geg	atc	cca	ctc	tat -	gat	atg	gag	gcc	aca	ttt	gca	gag	tat		818
	GIn		Ala	Ile	Pro	Leu		Asp	Met	Glu	Ala		Phe	Ala	Glu	${ t Tyr}$		
94		255					260					265						
						gac											8	866
97	Glu	Glu	Trp	Ser	Glu	Asp	Pro	Ile	Pro	Glu	Ser	Val	Ile	Gln	Asn	Tyr		
98	270					275					280					285		
100	aac	aaa	gca	cta	caq	, cag	ctq	qaq	aaa	tat	aaa	ccc	: tat	gaa	σaa	gca		914
101	Asn	Lys	Āla	Leu	Gln	Gln	Leu	Ğlu	Lvs	Tvr	Lvs	Pro	Tvr	Ğlu	Ğlu	Ala		
102		-			290				-	295			- 4 -		300			
		t.t.a	cad	σса	gag	gca	cca	agg	cta	gca	αаа	tat	caa	aca				962
105	Leu	Leu	Gln	Ala	Glu	Ala	Pro	Ara	Len	Δla	Glu	Туг	Gln	Δla	Тиг	Tlo		702
106			0	305			1.0	**** 9	310		Olu	- y -	GII	315	-	116		
		+++	aaa			att	aaa	ast.			000	a++	020			***	-	010
																	_	1010
		PHE			. гу	Ile	GTA			Ата	Arg	тте			тте	Phe		
110			320					325					330					
						gag]	L058
	Glu		Ala	Leu	Val	Glu		Cys	Leu	Val	Pro	Asp	Leu	Trp	Ile	Arg		
114		335					340					345						
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		Ser	Gln	Tyr	Leu	Asp	Arg	Gln	Leu	Lys	Val	Lys	Asp	Leu	Val	Leu		
118	350					355					360					365		
120	tct	gta	cat	aac	cgc	gct	att	aga	aac	tgc	ccc	tgg	aca	qtt	qcc	tta	1	154
121	Ser	Val	His	Asn	Arq	Ala	Ile	Arq	Asn	Cvs	Pro	Tro	Thr	vаl	Āla	Len		
122					370			_		375					380			
	taa	agt	caa	tac		ttg	acc	atα	σασ		cat	ααa	att	rat		022	1	202
125	Trn	Ser	Ara	Tyr	Len	Leu	Δla	Mot	Glu	Δra	Uic	Glw	Val	Acn	Uic	Cla	1	.202
126		001	**** 9	385	LCu	cu	1114	1100	390	n y	1113	GLY	Val		птэ	GIII		
	at a	a++	+ ~+	-	200	++~	~~~			+				395			_	050
120	y L d	a L L	CCL	y Ld	m L	ttc	yay	aad -	gct	LLG	aat	gcc	ggc	LTC	atc	cag	1	.250
	Val	тте		val	ınr	Phe	GLU		АТа	ьeu	ASN	АТа	_	Phe	тте	Gin		•
130			400					405					410					
132	gcc	act	gat	tat	gtg	gag	att	tgg	cag	gca	tac	ctt	gat	tac	ctg	agg	1	298
133	Ala	Thr	Asp	Tyr	Val	Glu	Ile	Trp	Gln	Ala	Tyr	Leu	Asp	\mathtt{Tyr}	Leu	Arg		

RAW SEQUENCE LISTING

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Input Set : A:\0020-4817P.ST25.txt

Output Set: N:\CRF3\09242001\1763985.raw

	34		41					42	0				42	5				
13	36	aga	ag	g gt	t ga	t tt	c aa	a ca	a ga	c tc	c aq	t aa	2 (72	· ~ ~+	o da	n na	g ttg	1246
	,	n y	UT.	g Va	l As	p Ph	е Ly	s Gl	n Ās	p Se	r Se	r Lv	s G1	ıı T.e	ng ga	y ya n Cl	g ttg u Leu	1346
	,,,	4 J U					43	כ				11	Λ				4 4 5	,
14	10	agg	gc	c gc	c tt	t ac	t cg	t gc	c tt	g ga	or ta	t ot		αca	α αa	a at	_	
		Arg	Ala	a Al	a Ph	e Thi	r Ar	j Āl	a Le	u Gl	u Tv:	r Lei	n T.v	e Gl	n C1	y yu	g gaa l Glu	1394
	- 4					45	U				4.5	5				16	Λ	
14	14	gag	cgt	t tt	c aa	t ga	g agt	g g	t ga	t cc	a ad	- c ta	c at	σ at	t at			1440
14	15 (Glu	Arg	g Ph	e Ası	ı Gli	ı Sei	r ĞÎ	v Ası	o Pro	o Se	r Cv	c yc	у ас 1 ті	o Mo	9 Ca + 01	g aac n Asn	1442
7.7					40.)				470)				17	E		
14	8 1	tgg	gct	age	gati	gad	a act	. caa	a cto	ı ta	- raat	- aad	~ =+	~ ~-	σ an		t cgg	1.400
14	9 1	Trp	Ala	a Ar	Ile	e Gli	ı Ala	Arc	ı Lei	1 Cv	s Δer	au.	o Mo	y ca + ci	y aa	a gc	t egg a Arg	1490
15	0			48)				485	, oj. 5	, 1131	ו מטו	ı Me	49		S AL	a Arg	
15	2 9	gaa	cto	t t q	ı qat	ago	ato	ato	r acc	າ ລາດຄ	a aas	2 22+	- ~~	49	·	_	c aac	
15	3 (lu	Leu	ı Tr	Asr	Sei	11e	Met	Th:	· Arc	1 990 1 611	i aai	- 90°	c aa	g tad	c gc	c aac a Asn	1538
15	4		495	;	_			500	1112)	- AI	, 917	ASI			s ту:	r Ala	a Asn	
15	6 a	itg	tgg	r cta	ι σac	tat	tac	aac	, . ota			. ~~+	50	.			cag	
15	7 M	íeť	Trp	Lei	ı Glu	Tvr	Tyr	Δer	T.A.	yac Lan	ayo	. gci	. ca	r gg	t gad	aco	c cag	1586
15	8 5	10	-			1 -	515	ASI.	пес	GIU	LALG	E A La	HI	s GT	y Ası	Thi		
			tac	cac	raad	act	cta	Cac			. ~+~	520					525 tac	
16	1 H	lis	Cvs	Arc	Lvs	Δla	. CLy Lan	Uic	. cyy	י אור א	; g.c	cag	tgo	c aco	agt	gad	tac Tyr	1634
16	2		-1-	5	-12	530	Leu	1113	AIG	Ald	val	GIn	Суя	5 Thi	: Sei			
		ca	σασ	cac	ato			α± α	++>	a+ a	535	4				540)	
16	5 P	ro	Glu	His	Val	Cve	Glu	y cy 1751	Tou	. CLC	acc	atg	gag	j ago	j aca	ı gaa	ggt Gly	1682
160	6				545	Cys	GIU	Val	ьeu	Leu Leu	Thr	мет	GIU	ı Arg			Gly	
		ct.	tta	αаа		taa	ant.	2+2	~~+	550					555	;		
169	9 S	er	Leu	Glu	Agn	Trn) ac	Tla	31-	911	cag	aaa	act	gaa	acc	cga	tta	1730
170)		u	560	1155	115	ASP	тте	565	val	GIn	Lys	Thr			` Arg	Leu	
		ct.	cat.			aaa	O a O	202	262					570)			
173	3 A	la .	Ara	Val	Agn	Glu	Cln	aya	Mot	aag	gct	gca	gag	aag	gaa	gca	gcc	1778
174	1		575	· u ·	11511	GIU	GIII	580	Met	ràs	Ala	Ala	GLu	Lys	Glu	Ala	gcc Ala	
				cad	саа	maa	ma a	200		~-4			585					
177	Le	eu '	yoj Val	Gln	Gln	Glu	Glu	Clu	aay	get	gaa	caa	cgg	aaa	aga	gct	cgg	1826
178	3 5	90		0	0111	Olu	595	GLU	ьуѕ	Ата	Glu	GIN	Arg	Lys	Arg	Ala		
			πασ	aaσ	222	aca		222				600					605	
181	. A	la (3111	Lvs	Tave	3 l a	LLa	aaa Ta	aag	aag	aaa	aag	atc	aga	ggc	cca	gag	1874
182	!	(J_4	цуз	цуз	610	Leu	гаг	ьys	ьуs	Lys	Lys	Ile	Arg	Gly		Glu	
		aa d	ימכ	aua	acs.		~~~	~			615			•		620		
185	Lix	75 Z	Ara	Clv	ηcα	yaı.	Clu	yac	gat	gag	aaa	gag	tgg	ggc	gat	gat	gaa	1922
186	-1		9	O L J	625	rah	GIU	ASP	Asp	GIU	Lys	GIu	Trp	Gly	Asp	Asp	Glu	
		a c	nar	C a C		+				630					635			
189	G1	11 6	1111	Cln	Dro	Com	aaa T	ege	aga	agg	gtc	gag	aac	agc	atc	cct	gca	1970
190	01	. u C	JIU	640	PIO	ser	гух	Arg	Arg	Arg	Val	Glu	Asn	Ser	Ile	Pro	Ala	
		י לי	anı		202	a = =	2 2 ±	-4-	645					650				
193	<u>3</u> ο	aG	19u 11u	Clu	αCα Th∞	Caa	aal Aa-	gta	gaa	gta	gca	gca	ggg	CCC	gct	ggg	aaa	2018
194	17.1		55	3.T.U	THT.	GTU	ASII	val	GLu	Val	Ala	Ala	Gly	Pro	Ala	Gly	Lys	
エノマ		U))					660					665					
197	ري ر	u y	la la	η C C λ 1 ¬	y Ld	yat Ma-	y t g	gag	CCC	cct	tcg	aag	cag	aag	gag	aag	gca	2066
198	\sim_{I}	J 41	.14	чта	val	ASP	val	GLU	Pro	Pro	Ser	Lys	Gln	Lys	Glu	Lys	Ala	
± 2 0	0 /	J			•		675					680					685	



RAW SEQUENCE LISTING DATE: 09/24/2001 PATENT APPLICATION: US/09/763,985 TIME: 15:44:13

Input Set : A:\0020-4817P.ST25.txt
Output Set: N:\CRF3\09242001\I763985.raw

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201	Ala	Ser	Leu	Lys	Arg	Asp	Met	Pro	Lys	Val	Leu	His	Asp	Ser	Ser	Lys		
202					690					695					700			
204	gac	agc	atc	acc	gtc	ttt	gtc	agc	aac	ctg	ccc	tac	agc	atg	cag	gag	2	2162
205	Asp	Ser	Ile	Thr	Val	Phe	Val	Ser	Asn	Leu	Pro	Tyr	Ser	Met	Gln	Glu		
206				705					710					715				
208	ccg	gac	acg	aag	ctc	agg	cca	ctc	ttc	gag	gcc	tgt	ggg	gag	gtg	gtc	2	2210
209	Pro	Asp	Thr	Lys	Leu	Arg	Pro	Leu	Phe	Glu	Ala	Cys	Gly	Glu	Val	Val		
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213	Gln	Ile	Arg	${\tt Pro}$	Ile	Phe	Ser	Asn	Arg	Gly	Asp	Phe	Arg	Gly	Tyr	Cys		
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216	tac	gtg	gag	ttt	aaa	gaa	gag	aaa	tca	gcc	ctt	cag	gca	ctg	gag	atg	2	2306
217	Tyr	Val	Glu	Phe	Lys	Glu	Glu	Lys	Ser	Ala	Leu	Gln	Ala	Leu	Glu	Met		
218	750					755					760					765		
220	gac	cgg	aaa	agt	gta	gaa	ggg	agg	cca	atg	ttt	gtt	tcc	ccc	tgt	gtg	2	2354
221	Asp	Arg	Lys	Ser	Val	Glu	Gly	Arg	Pro	Met	Phe	Val	Ser	Pro	Cys	Val		
222					770					775					780			
224	gat	aag	agc	aaa	aac	ccc	gat	ttt	aag	gtg	ttc	agg	tac	agc	act	tcc	2	2402
225	Asp	Lys	Ser	Lys	Asn	Pro	Asp	Phe	Lys	Val	Phe	Arg	Tyr	Ser	Thr	Ser		
226				785					790					795				
228	cta	gag	aaa	cac	aag	ctg	ttc	atc	tca	ggc	ctg	cct	ttc	tcc	tgt	act	2	2450
229	Leu	Glu	Lys	His	Lys	Leu	Phe	Ile	Ser	Gly	Leu	${\tt Pro}$	Phe	Ser	Cys	Thr		
230			800					805					810					
					gaa												2	24.98
233	Lys	Glu	Glu	Leu	Glu	Glu	Ile	Cys	Lys	Ala	His	Gly	Thr	Val	Lys	Asp		
234		815					820					825						
					acc												2	2546
237	Leu	Arg	Leu	Val	\mathtt{Thr}	Asn	Arg	Ala	Gly	Lys	Pro	Lys	Gly	Leu	Ala	Tyr		
238	830					835					840					845		
240	gtg	gag	tat	gaa	aat	gaa	tcc	cag	gcg	tcg	cag	gct	gtg	atg	aag	atg	2	2594
241	Val	Glu	Tyr	Glu	Asn	Glu	Ser	Gln	Ala	Ser	Gln	Ala	Val	Met		Met		
242					850					855					860	,		
					atc												2	2642
245	Asp	Gly	Met	Thr	Ile	Lys	Glu	Asn	Ile	Ile	Lys	Val	Ala	Ile	Ser	Asn		
246				865					870					875				
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	Gly	_	Pro	Met	Leu	Leu		Gln	Thr	\mathtt{Tyr}	Gly		Arg	Gly	Lys	Gly		
254		895					900					905						
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	_	Thr	Gln	Leu	Ser		Leu	Pro	Arg	Ala		Gln	Arg	Pro	Ser			
258						915					920					925		
					gct												2	2834
	Ala	Ala	Pro	Gln	Ala	Glu	Asn	Gly	Pro		Ala	Ala	Pro	Ala		Ala		
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RAW SEQUENCE LISTING

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Input Set : A:\0020-4817P.ST25.txt
Output Set: N:\CRF3\09242001\I763985.raw

265 266	Ala Pro	Ala Ala 945		ı Ala Pro	Lys Met 950	Ser As	sn Ala	Asp Phe 955	Ala	
	aag ctg	ttt ctg	aga aag	, tgaacgg	gac gctgg	ggagac	aggaaa	tgcc		2930
269	Lys Leu	Phe Leu	Arg Lys	3						
270	_	960								
272	ttacttca	act ctgg	cccggc g	gacetece	a ccaccca	agca gt	gcactg	gg gatg	gacagg	2990
					ga tggctco					3050
276	ggggttct	caa gtca	agagcc t	ttcagtgo	ct ccctcat	tatt ga	igggcag	tg gcag	aaaagt	3110
					g gtgtcct					3170
					ic tgtttt					3230
					ic acttcto					3290
					ıa atggcaç					3350
		,,, , , ,			ca gctataa				-	3410
					t tgtaaat	-				3470
				_	t gttttgt					3530
		-	_		a gtgacct		-			3590
	-			_	ia atgcaaa					3650
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	<211> LE									
	<212> TY									•
	<213> OF			iprens						
	<400> SH			The Cor	Ala Ser	Clu Dr	co Clu	Ala Clu	Sor	
311		IIII AIa	5 5	i illi sei	Ald Sel	GIU PI	.o gra	15	261	
		Gly Pro	_	Aen Gla	Glu Glu	Asp Gl	u Val		Δla	
315	Lys Ald	20	, LyS mic	. Map Cly	25	1100 01	u vui	30		
	Ara Thr		Tvs Val	Leu Ser	Arg Ala	Val Al	a Ala		Tvr	
319	1119 1111	35	270 (43	40	9	,	45		-1-	
	Lvs Thr		Pro Ala	Trp Asp	Gln Gln	Glu Gl	u Gly	Val Ser	Glu	
323	50	· · · ·		55		60				
	Ser Asp	Gly Asp	Glu Tyr	Ala Met	Ala Ser	Ser Al	a Glu	Ser Ser	Pro	
327	_		70			75			80	
330	Gly Glu	Tyr Glu	Trp Glu	ı Tyr Asp	Glu Glu	Glu Gl	u Lys	Asn Gln	Leu	
331			85		90			95		
334	Glu Ile	Glu Arg	Leu Glu	ı Glu Gln	Leu Ser	Ile As	sn Val	Tyr Asp	Tyr	
335		100			105			110		
338	Asn Cys	His Val	Asp Leu	ı Ile Arg	Leu Leu	Arg Le	eu Glu	Gly Glu	Leu	
339		115		120			125			
		Val Arg	Met Ala	-	Lys Met			Phe Pro	Leu	
343	130			135		14	-		_	
		Glu Leu			Leu His		u Ile	Ser Met		
	145		150			155	_	_	160	
	Gln Asp	Gly Leu		Glu His	Val Tyr	Asp Le	eu Phe		Ala	
351			165		170		_	175	_	
	Val Lys			Pro Asn	Ile Trp	Leu Gl			Tyr	
355		180			185			190		

VERIFICATION SUMMARY

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Input Set : A:\0020-4817P.ST25.txt

Output Set: N:\CRF3\09242001\I763985.raw

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